

ABSTRACT

The present invention provides a slurry expressing and liquid displacing device which is used to express slurry and then separate out effluence and solid of the slurry through radial pore volume displacement of continuous filtration and washing for getting high purity solid. The slurry expressing and liquid displacing device includes a expressing mechanism, a displacing mechanism, a blender, a collecting tube, and first and second storage troughs. The expressing mechanism includes a first helical transmission shaft having a compression zone for transporting and efficiently compressing the slurry. The displacing mechanism includes a second helical transmission shaft rotatably connected with the first helical transmission for connecting with displacing liquid such as water. A plurality of through holes is disposed at the side surface of the second helical transmission shaft to radially spray through for facilitating the displacing liquid to flow out therethrough. Thus effluence and solid of the slurry are efficiently separated out thereby shortening the time required for operation and increasing separating efficiency.